

Remarks/Arguments:

The specification is amended at **page 1** to identify the instant application as a continuation-in-part (CIP) application of previously pending application S.N. 10/354,000, now U.S. Patent 6,828,514 (**Chan et al**), which issued 12/04/04, following publication as US 2004/0150969 A1 on 08/05/04. US 2004/0150969 A1 is the sole document relied on by the Examiner as the basis for the rejection under 35 USC 102(e) of claims 1, 3-6, 9, 11-15 and 22-25 and under 35 USC 103(a) of remaining dependent claims 2 and 10 of the instant application. The pending application meets the PTO requirements for a CIP, which are:

(A) The first application and the alleged continuation-in-part application were filed with at least one common inventor (there are actually three common inventors here, Lauffer, Thomas and Markovich);

(B) The alleged continuation-in-part application was "filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application" (the instant application was filed 03/03/04, before S.N. 10/354,000 was published (08/05/2004) and before it issued (12/07/2004); and

(C) The alleged continuation-in-part application "contains or is amended to contain a specific reference to the earlier filed application." (the present amending to page 1 contains such specific reference).

See especially ***MPEP Section 201.8.***

In addition, both the cited document and the instant application are commonly owned, the Assignee being **Endicott Interconnect Technologies, Inc.**

Under the above circumstances, 35 USC 103(c)(1) states that in the case of a rejection under 35 USC 102(e), as applied here, a commonly owned (or under obligation of assignment) application by another may not be used to preclude patentability if such common ownership exists.

Finally, both the present application and the cited previously pending application describe substantially similar subject matter, including PCB's (and more particularly, the design and relative positioning of PCB dielectric and conductive layers), the passage of high (and low) speed (frequency) signals across PCB signal layers, and the utilization of conductive plated through holes relative to both dielectric and conductive layers of a PCB. In addition, both discuss signal shielding, a critical feature of the instantly claimed invention (albeit addressed in an entirely different and unique manner in the present application from that in **Chan et al**, as addressed in detail below). Applicants also note that the Examiner has recognized such similarities by the citation of **Chan et al**.

Because the present application is a continuation-in-part of the cited **Chan et al** document, removal of Chan et al as a reference against this application is respectfully urged. The rejection under 35 USC 102(e) based solely on **Chan et al** is thus overcome and withdrawal thereof urged. Likewise, the rejection under 35 USC 103(a) of dependent claims 2 and 10, based entirely on **Chan et al**, is also overcome. Withdrawal thereof is also urged. (Applicants note that claim 10 is not specifically identified on page 6, lines 1 and 2 of paragraph 6, but believe this a minor typographical error because of discussion of claim 10 further in paragraph 6).

In addition to the above, Applicants also respectfully submit that Chan et al does not teach or suggest the instantly claimed invention. Admittedly, **Chan et al** describes the use of adjacent signal lines (101 – FIGS. 7 and 8) on opposing sides of signal lines (105) which do provide “signal shielding to minimize noise coupling amongst signal lines” (paragraph 0038, lines 20 and 21). However, there is no teaching (or suggestion) in **Chan et al** to connect two signal lines using a thru-hole which, surprisingly, extends through a

solid ground plane and thus one of the layers intended to also provide such shielding. Applicants must again argue that it is not obvious to one of ordinary skill in the art, after considering **Chan et al** (and all of the other documents of record herein, for that matter) to sacrifice surface area of a layer designed to provide critical shielding because it would seem that doing so would adversely affect the required shielding properties. Applicants teach a unique way of doing so, one not remotely suggested by **Chan et al**. In this regard, Applicants must respectfully argue that the Examiner's comment that it is obvious to modify the structure of FIG. 8 with parts of the FIG. 1 structure in **Chan et al** is incorrect. **Chan et al** specifically teaches away from this by defining the FIG. 8 embodiment as representing "another aspect of the invention" (paragraph 0038, lines 1-3). Further, there is no discussion in **Chan et al** with respect to FIG. 1 of this aspect of their invention as providing signal shielding, nor of the desire to do so in said embodiment. This arises only with respect to the FIG. 8 embodiment of Chan et al, and it is only in FIG. 8 (in combination with FIG. 7) that **Chan et al** is able to accomplish this. And, significantly, the approach in FIG. 8 is not similar to or suggestive of the presently claimed approach. The signal shielding in FIGS. 7 and 8 of Chan et al is only possible in a single plane (a "continuous reference plane" as defined on line 26 of para 0038). In sharp contrast, the instantly claimed invention provides signal shielding using a ground layer on a separate plane from the signal lines, in addition to adjacent ground lines, thereby using at least two planes to provide shielding. Extending the limited teachings of **Chan et al** to teach or suggest the presently claimed invention is, in Applicants' firm opinion, an improper application of both *35 USC 102* and *35 USC 103*. Withdrawal of both rejections and allowance of the claims remaining herein is most respectfully requested.

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The Application is again deemed in condition for allowance and such action on the part of the Examiner is respectfully requested. Should the Examiner believe, however, that differences remain which, if overcome, would result in allowance of the Application and that said differences can be discussed in a phone conversation, the Examiner is respectfully requested to phone the undersigned, at the number below, for the purpose of discussing said differences and, hopefully, obtaining an allowance for this Application.

Respectfully submitted,



By _____

E-mail: Lawrence.Fraley@EITNY.com
Tel: (561) 575-3608
Fax: (561) 745-2741

Lawrence R. Fraley
Attorney for Applicant(s)
Reg. No. 26,885